

DETAILED ACTION

Status

1. Claims 1-12, filed as a preliminary amendment on January 18th, 2006, are pending.

Priority

2. Applicant's claim to foreign priority of Switzerland patent application 01257/03, filed July 18th, 2003 has been recorded.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted January 18th, 2006 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner. Please refer to applicants' copy of the 1449 form submitted herewith.

Claim Objections

4. **Claim 1** is objected to because of the following informalities:

Line 3: Misspelling of oxysulpha~~tes~~, which should read "oxysulphates"

Lines 5-6: The phrase "in contact with a aqueous solution containing..." is stated twice.

Line 9: The claim states a carbonate to alkali ratio, but it seems that Applicants mean to say an alkali carbonate to alkali hydroxide ratio of between 1 and 2.75.

Appropriate correction is required.

5. **Claim 2** is objected to because of the following informalities:

The claim states a carbonate to alkali ratio, but it seems that Applicants mean to say an alkali carbonate to alkali hydroxide ratio of between 1 and 2.75.

Furthermore, ration should read "ratio".

Appropriate correction is required.

6. **Claim 4** is objected to because of the following informalities: The claim states a carbonate to alkali ratio, but it seems that Applicants mean to say an alkali carbonate to alkali hydroxide ratio of between 1 and 2.75.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claims 1-12** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely

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exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitations of oxysulphate (line 3), alkali carbonate (line 6), and alkali hydroxides (line 8), and the claim also recites lanarkite (line 4), sodium or potassium carbonate (line 6), and sodium or potassium hydroxides (line 8) which are narrower statements of the range/limitations, respectively.

Furthermore, claim 1 references "an excess of between 0.01% and 10%" of what appears to be alkali carbonate, however there is no mention of the measurement of this percentage, whether by mass, volume, moles, etc which renders the excess unclear as one would not be able to appraise the scope of the claimed content of alkali carbonate.

8. Claims 2 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "carbonate/solvent molar ration". There is insufficient antecedent basis for this limitation in the claim (no mention of solvent in claim 1).

Allowable Subject Matter

9. Claims 1-12 would be allowable after overcoming the instant 112 rejections and claim objections for the following reasons:

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The closest prior art of Kolakowski and Morachevskii do not teach a process for desulphating lead-acid battery electrode slimes with both an alkali carbonate and an alkali hydroxide nor the molar ratio of alkali carbonate to alkali hydroxide claimed.

Conclusion

10. Additional references deemed pertinent to the instant application are listed below:

D. Atanasova et al, Desulphurization of lead carbonate by sodium carbonate and sodium hydroxide, *Journal of the University of Chemical Technology and Metallurgy*, Vol. 43(2), 2008, p. 267-272.

N.K. Lyakov et al, Desulphurization of damped battery paste by sodium carbonate and sodium hydroxide. *Journal of Powder Sources*, Vol. 171 (2007), p. 960-965.

Y. S. Kuznetsova et al . Desulfation of active paste from lead battery scrap with ammonium carbonate, *Russian Journal of Applied Chemistry*, 2008, Vol. 81, No. 7, pp. 1283-1286.

Y.S. Kuznetsova et al. Behavior of Antimony in Desulfation of the active paste from lead battery scrap with the use of potassium carbonate or hydroxide, *Russian Journal of Applied Chemistry*, Vol. 77, No. 6, (2004) p. 1022-1024.

A.G. Morachevskii et al. Removal of sulfur from the active mass of lead battery scrap. *Russian Journal of Applied Chemistry*, Vol. 74, No. 7, (2001), p. 1103-1105.

Olper - US 2006/0018819 A1

Dorenfeld – US 3,689,253

Kolakowski – US 4,269,810

-- Claims 1-12 (All pending) are rejected

-- No claims are allowed

The rejections above rely on the references for all the teachings expressed in the text of the references and/or one of ordinary skill in the metallurgical art would have reasonably understood or implied from the texts of the references. To emphasize certain aspects of the prior art, only specific portions of the texts have been pointed out.

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Each reference as a whole should be reviewed in responding to the rejection, since other sections of the same reference and/or various combinations of the cited references may be relied on in future rejections in view of amendments.

All recited limitations in the instant claims have been met by the rejections as set forth above. Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. § 1.121; 37 C.F.R. Part §41.37 (c)(1)(v); MPEP §714.02; and MPEP §2411.01(B).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark L. Shevin whose telephone number is (571) 270-3588 and fax number is (571) 270-4588. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark L. Shevin/

/Roy King/

Supervisory Patent Examiner, Art Unit 1793

10-564,989
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